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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,936	02/01/2001	Francis I. Akers	GODG-1310	3856

7590 07/19/2004  
Kenneth D'Alessandro  
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EXAMINER

FOX, JAMAL A

ART UNIT PAPER NUMBER

2664

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/775,936

Applicant(s)

AKERS ET AL.

Examiner

Jamal A Fox

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 11-25, 28, 29 and 31 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 7-10, 26, 27, 30 and 32-37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4 and 6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

<b>Notice of References Cited</b>	Application/Control No. 09/775,936	Applicant(s)/Patent Under Reexamination AKERS ET AL.	
	Examiner Jamal A Fox	Art Unit 2664	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,335,936	01-2002	Bossemeyer et al.	370/420
	B	US-6,236,664	05-2001	Erreygers, Jan	370/492
	C	US-6,266,395	07-2001	Liu et al.	379/27.01
	D	US-6,466,588	10-2002	Michaels, Jim	370/493
	E	US-6,362,630	03-2002	Lowell et al.	324/600
	F	US-6,483,902	11-2002	Stewart et al.	379/90.01
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings are required in this application because the drawings have poor line quality and text that is illegible. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 31 is objected to because of the following informalities: Claim 31, line 1 after "a", "single" is spelled incorrectly. Appropriate correction is required.
3. Claim 35 is objected to because of the following informalities: Claim 35, line 7 after "said", "DSLAM" is spelled incorrectly. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 11-20 and 28 recites the limitation "The method" in --line 1 of the claims--.
- There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 3, 6, 21-25, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erreygers in view of Bossemeyer, Jr. et al.

Referring to claim 1, Erreygers discloses a data loop extension for a communication system (Figures 2 and 4), comprising:

a symmetric bi-directional (bi-directional, col. 4 line 63-col. 5 line 9, col. 5 lines 30-35 and col. 5 lines 61-66) transmission line having a first end and a second end;

a remote termination unit (RT, Figures 2 and 4 ref. sign 35 and respective portions of the spec.) coupled between the first end of the transmission line and a plurality of customer premise equipment (Customer Premise, Figures 2 and 4 ref. sign 20;

a line card (COT, Figures 2 and 4 ref. sign 15 and respective portions of the spec.) coupled to the second end of the transmission line; and

at least one repeater (Repeater Unit, Fig. 2 ref. sign 50 and Fig. 4 ref. sign 70 and respective portions of the spec.) coupled between the first and second end of the transmission line, but fails to explicitly teach of the remote termination unit being configured to receive a plurality of ATM data from the customer premise equipment over

a respective ADSL link for transmission over the transmission line; the line card being configured to receive the ATM data transmitted from the remote termination unit over the transmission line; and the repeater being configured to detect the ATM data received from the remote termination unit and to regenerate the ATM data for transmission to the line card. However, Bossemeyer, Jr. et al. discloses transmitting and receiving ATM data over ADSL links in (col. 16 line 65-col. 17 line 24). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the remote termination unit being configured to receive a plurality of ATM data from the customer premise equipment over a respective ADSL link for transmission over the transmission line; the line card being configured to receive the ATM data transmitted from the remote termination unit over the transmission line; and the repeater being configured to detect the ATM data received from the remote termination unit and to regenerate the ATM data for transmission to the line card to the invention of Erreygers in order to allow for users to share computer data over the DSL line without running over the internet or a user may want to use the DSL line for voice or facsimile data as suggested by Bossemeyer, Jr. et al.

Referring to claim 2, Erreygers discloses the system of claim 1 wherein the repeater and the remote termination unit are line powered over the transmission line (col. 2 lines 50-55 and col. 2 line 66-col. 3 line 4).

Referring to claim 3, Erreygers discloses the system of claim 1, but does not explicitly teach of the repeater being a symmetric straight-through repeater, and further, wherein the repeater is configured to detect ATM data received from either the first or

the second end of the transmission line, and to regenerate the ATM data for transmission to the respective other of the first and second end of the transmission line. However, Bossemeyer, Jr. et al. discloses transmitting and receiving ATM data over ADSL links in (col. 16 line 65-col. 17 line 24). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the repeater being a symmetric straight-through repeater, and further, wherein the repeater is configured to detect ATM data received from either the first or the second end of the transmission line, and to regenerate the ATM data for transmission to the respective other of the first and second end of the transmission line in order to allow for users to share computer data over the DSL line without running over the internet or a user may want to use the DSL line for voice or facsimile data as suggested by Bossemeyer, Jr. et al.

Referring to claim 6, Bossemeyer, Jr. et al. discloses the system of claim 1 wherein each ATM data (col. 16 line 65-col. 17 line 24) is 53 bytes in length (inherent, all ATM cells have a fixed length of 53 bytes which allows for very fast switching).

Referring to claim 21, Erreygers discloses the system of claim 1 wherein the remote transmission unit further includes a low pass filter (Fig. 2 ref. sign 52 and Fig. 4 ref. sign 74).

Referring to claim 22, Erreygers discloses the system of claim 21 wherein said low pass filter is configured to combine an ADSL signal and a POTS signal onto a twisted pair (col. 1 lines 9-25, col. 1 line 58-col. 2 line 25 and col. 2 lines 40-49).

Referring to claim 23, Erreygers discloses the system of claim 1 wherein each of said ADSL links coupled to a respective one of said plurality of customer premise equipments may be configured to support a substantially minimum data rate of approximately 384 kbps (inherent, col. 6 lines 13-32).

Referring to claim 24, Erreygers discloses the system of claim 23 wherein each of said ADSL links may be configured to support a data rate of up to approximately 1.544 Mbps (inherent, col. 6 lines 13-32).

Referring to claim 25, Erreygers discloses the system of claim 23 wherein said plurality of customer premise equipments includes four customer premise equipments, each coupled to said remote termination unit via said respective ADSL links, and further, wherein each of said four ADSL links may be configured to simultaneously support said data rate of approximately 384 kbps (inherent, col. 6 lines 13-32).

Referring to claim 29, Erreygers discloses the system of claim 1, but does not explicitly teach of the system further including:

- a data bus coupled to the line card configured receive bit streams of decoded ATM data from the line card;

- an ATM switch coupled to a data network; and

- an ATM controller coupled to the data bus configured to receive the data bit streams from said data bus, the ATM controller further configured to connect said ATM switch via an ATM link for communication with the network, however Bossemeyer, Jr. et al. discloses a data bus (Fig. 19, ref. sign 590 and respective portions of the spec.)



coupled to the line card (Fig. 6, subscriber unit 100 and respective portions of the spec.)  
configured receive bit streams of decoded ATM data from the line card;

an ATM switch (Fig. 19, ref. sign 592 and respective portions of the spec.)  
coupled to a data network; and

an ATM controller (NIC, col. 4 lines 49-63) coupled to the data bus configured to  
receive the data bit streams from said data bus, the ATM controller further configured to  
connect said ATM switch via an ATM link for communication with the network.

Therefore it would have been obvious to one having ordinary skill in the art at the time  
the invention was made to have included the ATM switch, ATM controller, data bus and  
line card of Bossemeyer, Jr. et al. to the invention of Erreygers in order to allow for  
users to share computer data over the DSL line without running over the internet or a  
user may want to use the DSL line for voice or facsimile data as suggested by  
Bossemeyer, Jr. et al.

Referring to claim 31, Bossemeyer, Jr. et al. discloses the system of claim 29  
wherein the ATM switch includes a single ATM link (Fig. 19 ref. sign 584 and respective  
portions of the spec.).

#### ***Allowable Subject Matter***

8. Claims 4, 5, 7-10, 26, 27, 30, 32-37 are objected to as being dependent upon a  
rejected base claim, but would be allowable if rewritten in independent form including all  
of the limitations of the base claim and any intervening claims.

***Conclusion***

**9. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 305-3988, (for formal communications intended for entry)

**Or:**

(703) 305-3988 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA. 22202, Sixth Floor (Receptionist).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamal A. Fox whose telephone number is (703) 305-5741. The examiner can normally be reached on Monday-Friday 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (703) 305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

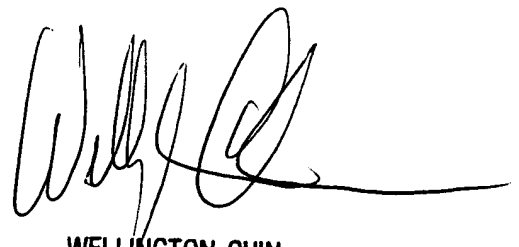
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A handwritten signature in cursive script, appearing to read "Jamal A. Fox".

**Jamal A. Fox**

A handwritten signature in cursive script, appearing to read "Wellington Chin".

**WELLINGTON CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**